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(71) Applicant (for all designated States except US): **APPLIED MATERIALS, INC.** [US/US]; 3050 Bowers Avenue, Santa Clara, CA 95054 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Ling**

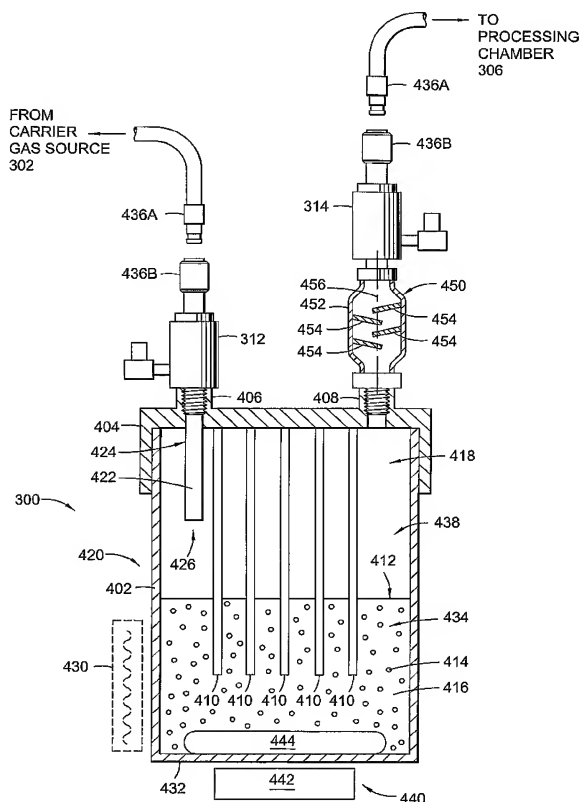
[CN/US]; 784 Dartshire Way, Sunnyvale, CA 94087 (US). **KU, Vincent W.** [US/US]; 1830 Daltrey Way, San Jose, CA 95132 (US). **CHUNG, Hua** [CN/US]; 4645 Piper Dr., San Jose, CA 95129 (US). **MARCADAL, Christophe** [FR/US]; 1180 Lochinvar Ave., #88, Sunnyvale, CA 94087 (US). **GANGULI, Seshadri** [IN/US]; 713 Golden Oak Drive, #7, Sunnyvale, CA 94086 (US). **LIN, Jenny** [US/US]; 20532 El Dorado Ct., Saratoga, CA 95070 (US). **WU, Dien-Yeh** [—/US]; 1326 Longfellow Way, San Jose, CA 95129 (US). **OUYE, Alan** [US/US]; 716 North Idaho Street, San Mateo, CA 94401 (US). **CHANG, Mei** [US/US]; 12881 Corte de Arguello, Saratoga, CA 95070 (US).

(74) Agents: **PATTERSON, B. Todd** et al.; MOSER PATTERSON & SHERIDAN, LLP, 3040 Post Oak Blvd., Suite 1500, Houston, TX 77056-6582 (US).

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(54) Title: METHOD AND APPARATUS FOR GENERATING A PRECURSOR FOR A SEMICONDUCTOR PROCESSING SYSTEM



(57) Abstract: Embodiments of the present invention are directed to an apparatus for generating a precursor for a semiconductor processing system (320). The apparatus includes a canister (300) having a sidewall (402), a top portion and a bottom portion. The canister (300) defines an interior volume (438) having an upper region (418) and a lower region (434). In one embodiment, the apparatus further includes a heater (430) partially surrounding the canister (300). The heater (430) creates a temperature gradient between the upper region (418) and the lower region (434). Also claimed is a method of forming a barrier layer from purified pentakis (dimethylamido) tantalum, for example a tantalum nitride barrier layer by atomic layer deposition.



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